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HINTS ON IMPOSITION.

AN ILLUSTRATED GUIDE FOR PRINTER AND PRESSMAN,
IN THE CONSTRUCTION OF BOOK-FORMS, ALSO
OTHER MATTERS PERTAINING TO
LETTER-PRESS PRINTING.

By T. B. WILLIAMS.

BUFFALO, N. Y.
THE MATTHEWS-NORTHRUP CO.
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INTRODUCTION.

AMONG printers no subject so much needs consideration as the imposition of book forms, including tariffs, folders, books of tables, and large and small pamphlets of every description.

In these days of progress, when printers may have placed in their hands monthly issues of journals of high artistic merit devoted exclusively to the art of printing, it is not intended to criticise the merits of various modes of imposition, but rather to place before the readers such Hints on Imposition as may make this book a reliable guide to the workman in the often arduous task of imposing book forms.

Those who have had considerable experience in the composing room, in the making up of pages, and imposing of forms for the press, if they have been studious, have concluded that there is a mode of imposition which, if thoroughly understood, makes the matter of "sending a form to press" a pleasure, rather than the irksome duty it so often proves alike to the advanced printer and the novice.

Perhaps the chief cause of the unrest of an apprentice, when about to enter upon the art as a journeyman, is that one of the first duties which will devolve upon him may be the imposition of a form, and this anxiety may account to some extent for the hesitancy of many boys to step out into the world as journeymen printers, able to take care of themselves not only at the case as compositors, but at the stone.

The question of the ability of a printer to become proficient in the artistic arrangement of types will not be dealt with, as it is regarded by the writer as occupying an entirely separate province, not to be identified with the purpose of this book. Although there are no "departments," it is the design of the writer to present in a simple manner the best methods of "imposition," and "locking up" of book forms.

It is a fact that many printers who are highly proficient in other branches of the trade pertaining to the type room, and who have been in a composing room for many years where type and plate forms of almost endless variety have been prepared for the press, cannot with any degree of certainty lay out the pages of a form and place the correct margins in a folio. A "make-up" having a thorough knowledge of imposition is seldom seen at the stone with a sheet of paper in his hand, as the relation of the folded sheet to the type form is beforehand clearly defined in his mind. It is a pleasure to see the proficient workman laying the pages side by side without any helps save his knowledge of their relative positions, and placing in the margins with as little difficulty as though he were preparing a form for a treadle press.

It is not the desire merely to present a method for the making up and imposition of book forms, but to render this work more easy all the way through. Hence, not only is the manner of laying out the pages dealt with, but also that of folding the sheet; the reason for so folding; the relation of the sheet to the type form, and of the latter to the pressman and binder.

It is not intended to endeavor to transform present methods of imposition, or the positions in which the printer now places his pages, but to explain as accurately as possible to journeyman and apprentice why they are so placed, and to give concise illustrations of the work in hand.

The author has, therefore, pleasure in presenting to the craft these directions, in the hope that they may serve to lighten the burdens which so many printers bear because pressrooms and binderies are to the compositor inaccessible departments of the printing industry, although so closely allied. He trusts that as these results of years of study of the subject have often proved a light to him they will be found to repay the careful perusal and consideration of the reader.

THE AUTHOR.

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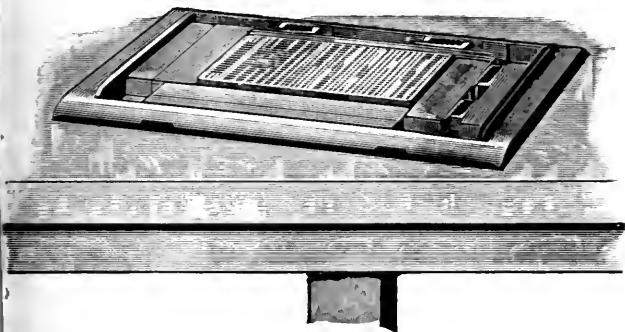
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IMPOSITION OF BOOK FORMS.

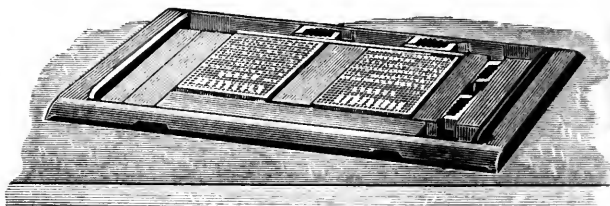


A SINGLE PAGE.

Lock up one page for the treadle-press with the head of the page to the left against solid furniture, and place the quoins at the foot and side. The pins are set in the tympan of the press at the bottom and left-hand edges of the sheet. In locking up, the compositor should, for convenience, work with the foot of the chase near to him.

TWO PAGES, OR A LEAF.

In a form of any number of pages, which "backs itself," it is readily seen that the paper, after having been printed on one side, should be turned over towards the page next in order of succession to that having the lowest folio in the form.



To find the margins of this form, fold the sheet once through the centre, and measure with it from the outer edge of one page to the inner (or back) edge of the other, thus placing each page in the centre of the half-sheet. When four-page circulars or programmes are printed from two forms, additional margin at the outer edges improves the appearance of the work.

The working of borders or panels across the upper or lower parts of small programmes or other small designs is a matter to be left to the discretion of the compositor. Such panels deprive the Gordon pressman of gripper margin. If the panels are within one-quarter of an inch of the gripper edge of a sheet which is to be printed on a cylinder press, it is impossible to print them.

THE FOLIO.

The Folio, or half sheet of Quarto, a small form for the cylinder press, may be taken as a basis for the imposition of type forms, as four pages (or two leaves) joined together, make a book.

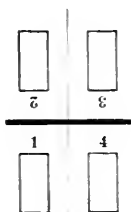


Fig. 3.

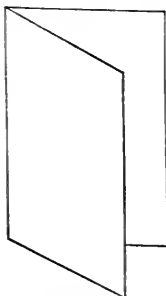


Fig. 3a.

Fig. 3 represents the Folio as it is usually worked. It *backs itself*. The sheet is then cut through the head margin into two parts, and when folded makes two books of four pages each.

In all ordinary book forms in which the folios (or numbers of the pages) run consecutively, the paper is "worked and turned"—*i. e.*, printed first on one side and then turned over endwise and printed again by the same type form.

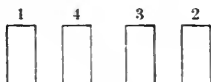


Fig. 3b.

In Fig. 3b the paper is also turned the long way of the sheet, and when printed on both sides makes two

books of four pages each. This form is less used, however, as the paper is not so conveniently handled.

FOLIO, THE BROAD WAY.

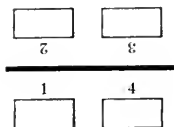


Fig. 3c.

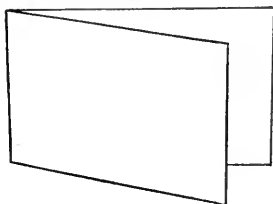


Fig. 3d.

In this form the paper is turned the narrow way to be backed, and is cut through the long way of the sheet.

FOLIO—TWO ON.

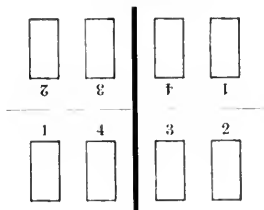


Fig. 3e.

The advantages of this form are apparent. In the printing of a large number of circulars (or otherwise) the presswork is reduced one-half. A form which will not cover more than one-half of one side of the sheet may be worked "two on," or double.

QUARTO, OR HALF SHEET OF OCTAVO.

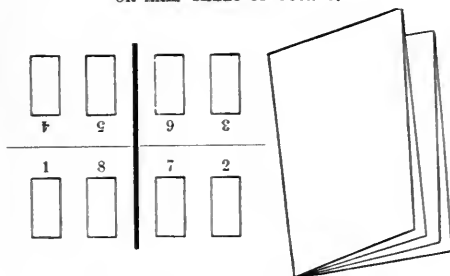


Fig. 4.

Fig. 4a.

This form may be called a "regular" Quarto. Like the Folio, the sheet to be backed is turned over the long way. When printed it is cut through the narrow way of the paper, making two books of eight pages (or four leaves) each.

It will be noted that page 1 (an odd number) is at the lower left-hand corner of this form, and that page 2 (an even number) is at the lower right-hand corner.

QUARTO IMPOSED FROM CENTRE.

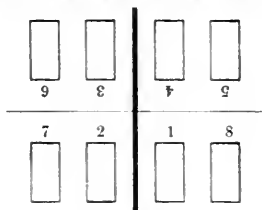


Fig. 5.

The first four pages of this form are placed in the centre because the first pages of a book often contain little reading matter, which is condensed in the type-work into a small space in the pages, and in work which requires very careful presswork it is of much advantage to the pressman to have full pages at the outer edges of the form. They serve as bearers to the inking rollers, and slurring is often avoided by this simple means.

The printed sheet is folded in the same manner as Fig 4a.

Note that an *odd* folio is at the lower left-hand corner, and an *even* folio at the right-hand corner of this form. When standing next to the feet of the pages of any regularly imposed form, or section of a form, the folio of the page at the extreme left will be *odd* and that furthest to the right *even*.

QUARTO—IN FOLDER FORM.

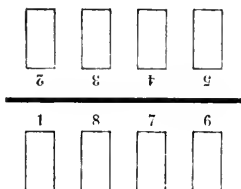


Fig. 6.



Fig. 6a.

Eight-page circulars in folder form are popular means of advertising. The simplicity of the folder gives it priority over the eight-page booklet, and as

the margins are narrower the capacity of the sheet is greater. The margins are usually about one-half that of the margins in a booklet of like dimensions when folded.

Unlike regular book forms, the margins of a folder are usually of equal width throughout. As the pages are often enclosed within rules, accuracy in the make-up and imposition is imperative for good *register.

The folded sheet from this form serves to illustrate the turning of the sheet to be backed. It is turned over the broad way — *towards the second folio*. For forms heretofore illustrated the paper has been turned over the long way on the feed board before "backing up." Before printing, the paper should be trimmed.

DEEP QUARTO.

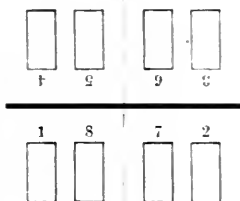


Fig. 6b.



Fig. 6c.

For an eight-page *booklet* this form is to be preferred to that shown in Fig. 6, and as an inset it is of better register and not so easily misplaced in binding.

* The correspondence of pages, or lines opposite to each other, or on the reverse side of the sheet. If one page is a line or two deeper than that opposite the headlines are made to register. In color-printing register is the adjustment in the design of one color to another.

The Deep Quarto is usually folded as shown in Fig. 6a, the imposition being as follows :

7	2	9	8
1	8	5	4

QUARTO—BROAD WAY.

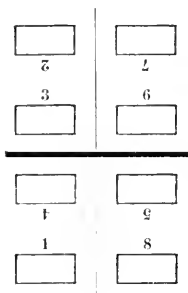


Fig. 7.

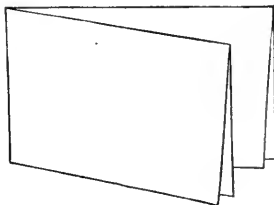


Fig. 7a.

Books of the shape indicated by this form are much used by publishers of illustrated catalogues.

Copy books and other books having a number of ruled lines on each page cannot be well printed from this form if put in the press the ordinary way of eight broad pages—with the sides of the pages next to the grippers. The rules would cut the inking rollers before many impressions had been made, the makeready would not be lasting, and the rules would eventually cut into the sheets being printed. To avert this the form should be placed in the press with the feet of the pages to the grippers, the paper being fed in endwise, but as good register is next to impossible when printed thus, the form is sent to press in two sections of four pages each.

OCTAVO.

A FORM OF EIGHT LEAVES OR SIXTEEN PAGES.

Commonly called a sixteen page form, is shown imposed in the regular way. *It backs itself*, the sheet being turned over the long way, and when cut through the narrow way makes two books of eight leaves each, or two sixteen-page books.

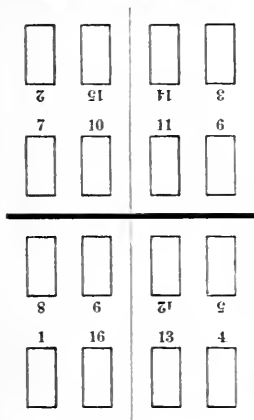


Fig. 8.

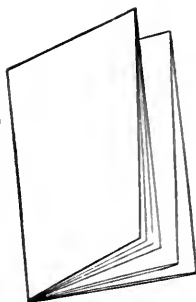


Fig. 8a.

It should be the aim of the printer to impose all forms of not more than thirty-two pages of ordinary work, or sixteen pages of fine work, so that the sheet will have a solid back when folded, as shown in Fig. 8a.

As it is not possible for the binder to fold a heavy sheet of paper of but eight leaves as easily as he would a light sheet containing a much larger number of leaves, it is often found necessary to cut the double

folds to prevent the sheets from wrinkling, or gathering at the corners. Pamphlets printed on "cheap" paper, however, are usually imposed to print and fold to the full capacity of the sheet, unless the pages are very small. It is difficult to fold with accuracy in the register a sheet of sixty-four pages, and if printed on heavy paper it is impossible.

Regarding the imposition of this form, it will be said for illustration that it is to be worked on a sheet of Double Demy paper. When the paper is printed on one side, and folded, it will present a book of sixteen leaves, the sixteen printed pages being on the *outside* of the sheet only. But the sheet is turned over end for end on the press and "backed," making two books of sixteen pages each. By folding either half of the printed sheet a complete book of sixteen pages, printed both *inside* and *outside* is the result. It will be seen, therefore, that this form (as previous forms) may be imposed and sent to press in two sections — *inside* and *outside*.

If a sheet of paper of the same size (Double Demy) were used for a book of sixteen pages, eight pages of which would cover one side of the sheet, the form would necessarily be divided into two sections, that containing page 1 being printed on the *outside* of the sheet, and that containing page 2 on the *inside* of the sheet. These two sections are shown in Fig. 8. The sections when imposed in separate chases being as follows:

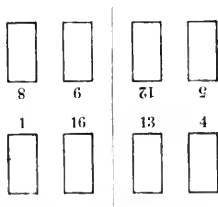


Fig. 8b. OUTSIDE SECTION.

The *outside section* contains the pages not cancelled in the following figures :

1, 2-3, 4-5, 6-7, 8-9, 10-11, 12-13, 14-15, 16.

The figures cancelled are the folios of the pages which constitute the *inside section*.

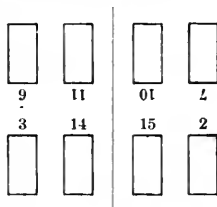


Fig. 8bb. INSIDE SECTION.

As the outside contains the first page (1) of the form, it will be termed the "odd" section, and as the inside section contains the second page (2) it will be termed the "even" section. In all regularly imposed outside sections the lowest folio (an odd number) will be found at the left-hand corner, and in inside sections the lowest folio (an even number) will be found at the right-hand corner. It will be observed, therefore, that the outside and inside sections of a sheet or form are reverse of each other. These sections are therefore imposed in reverse order, the make-up commencing from opposite corners to place his pages. Making a thirty-two page form the limit, this manner of laying down pages for a form obviates the necessity of committing to memory the positions of more than sixteen pages. This rule for the placing of pages in sections is a helpful maxim in the imposition of book forms of any magnitude and will be of assistance to the printer in proving the positions of the pages. In the above form it should not be forgotten

that in the outside (odd) section one page only is first laid down, then two are skipped alternately until the outside section is completed. For the inside (even) section, two pages are first laid in position and two skipped alternately. The utility of the method is inestimable in forms of not more than thirty-two pages.

OCTAVO—IMPOSED FROM THE CENTRE.

This is practically the same form as that preceding, excepting that each quarter-section is turned around toward the centre. One advantage of having

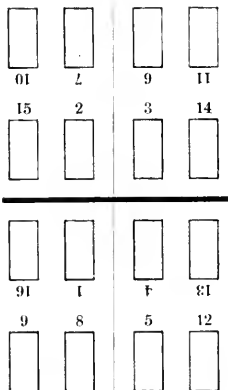


Fig. 8c.

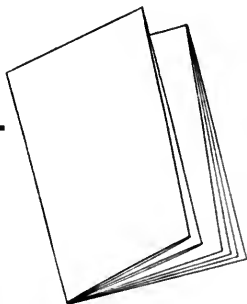


Fig. 8d.

the pages thus placed is explained under Fig. 5. The sheet is folded in a different manner from the regular Octavo. In forms of thirty-two pages this manner of imposition facilitates the binding.

The transposition of sections will sometimes avert the necessity of removing a crossbar from the chase. The habit of "cutting under" wide plates which project far enough into the margins to come into contact with the crossbars invariably affects the impression on the paper, and should if possible be avoided. It would be much better to have an odd sheet (folded as above) in a book, than to have a blurred print, though the usefulness of the crossbar be not taken into consideration.

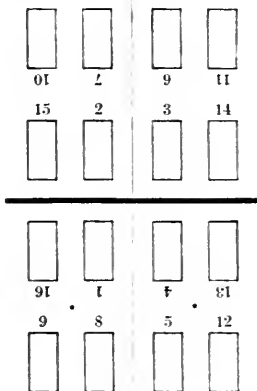


Fig. 8e.

The "points," as shown in Fig. 8e, are used in forms which are imposed for books, the sections of which are folded by machinery. In sixteen-page forms these points are usually placed exactly 15 inches apart— $7\frac{1}{2}$ inches each way from the centre of the first fold.

OCTAVO—TWO ON.

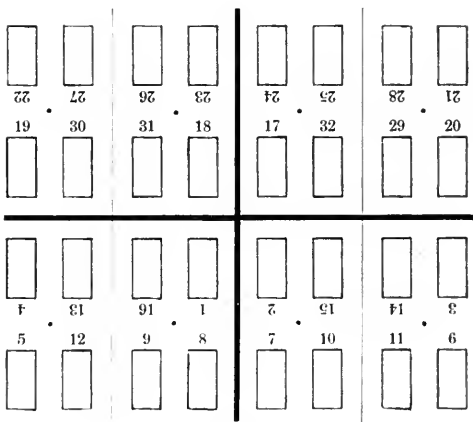


Fig. 8ee.

A book measuring 5 in. x 7 in. is said to be made of Quad. Crown (30 in. x 40 in.), thirty-two pages covering one side of the paper. As it is often the desire of the binder to have the printed paper delivered in forms of sixteen pages, two forms may be imposed end to end as shown in Fig. 8ee. The paper is turned over the long way for backing.

The points are removed after one side of the paper is printed.

BROAD OCTAVO.

With the exception of the manner of folding the sheet, the remarks pertaining to the "regular" Octavo are applicable to this form. Each section contains pages of the same folios, but in different positions. The sheet is turned the same way to be

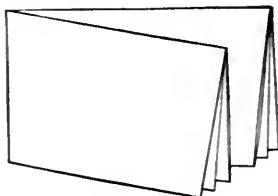


Fig. 8f.

<div></div>	<div></div>	<div></div>	<div></div>
7	11	11	8
5	12	11	6
<div></div>	<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>	<div></div>
8	6	01	1
1	16	15	2
<div></div>	<div></div>	<div></div>	<div></div>

Fig. 8g.

backed, and is cut through the narrow way before being folded.

In forms imposed from the outside the make-up should place the first page with the foot towards him,

making it the point from which the other pages are placed. This practice enables an experienced man to read his forms as he would a line of type, and to immediately detect a misplaced page. Made up from the centre this form would be as follows :

BROAD OCTAVO—IMPOSED FROM THE
CENTRE.

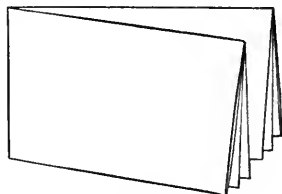


Fig. 8h.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
21	2	9	11
13	4	3	14
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
91	1	2	21
9	8	7	10
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Fig. 8i.

DEEP OCTAVO.

The demand for books of this shape is limited almost entirely to booklets consisting of eight to thirty-two pages, all of which would require but one-sixth or one-third of a sheet of D. Demy or D. Royal. Printed on a half-sheet or quarter-sheet the page would be too narrow for neatness in general appearance.

Every attention should be given to "squaring up" a form for accuracy in register, as there is nothing less pleasing to the eye than deep pages which are not evenly balanced in the book. Before being printed the sheets should be trimmed, as they are turned the narrow way on the feed-board of the press for "backing."



Fig. 8j.

It may be here stated that there is a generally accepted notion amongst printers that there should be a distinction made, when making up,

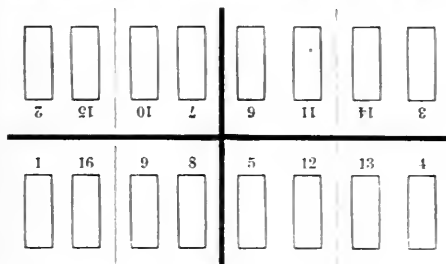


Fig. 8k.

imposing or locking up a form for the press, between a good and an ordinary line of work. Be this as it

may, it cannot be disputed that the results obtained from carelessness are never satisfactory. If the type pages for any book are well and evenly made up to one depth at the outset, the remainder of the adjustment is at the stone ; for a pressman, no matter how experienced he may be, cannot give to the printed sheet the finish of which it has already been deprived by a careless printer.

SEXTO.

A FORM OF SIX LEAVES OR TWELVE PAGES.

INSET TO FOLD IN.

A twelve-page form may properly be said to contain three distinct sections, two of which are "insets,"

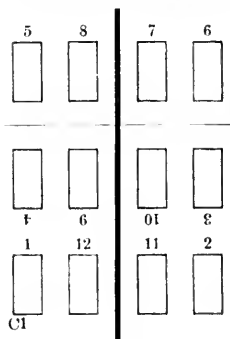


Fig. 9.

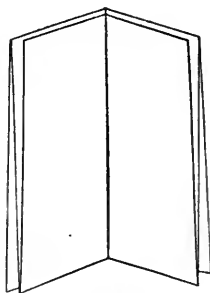


Fig. 9a.

that section containing the first and last pages of the form making the covers into which the others are inserted. In this form, however, these insets may be *folded in*, as shown in the illustration. The margins

at the heads and feet of the pages in the form should be carefully and equally divided, the form being imposed to a trimmed sheet and for good register in every respect the paper should be trimmed before being printed. This is a most useful form, as with care in the composing room and pressroom the sheet is easily folded, and taken altogether good results are obtained. The imposition of the form is more commonly referred to as an eight-page form with an inset (of four), with the following order of imposition, the inset being in the centre of the book :

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

The inset is simply a folio working the long way of itself, and the make-up will note that the first folio is odd, as in the main section of the form, and at the left with the foot towards him.

SEXTO — INSET CUT OFF.

A twelve-page form is here shown in which the inset is to be cut off and folded before being inserted. As folded sheets are "jogged" at the tops, the necessity for having the inset carefully cut off is obvious ; exactly one-half the space between the heads of the pages in the eight-page section is the measurement from the heads of the pages in the inset where the cut should be made. This form may be imposed from the centre in the same manner as the Quarto, the positions of the pages in the inset remaining the same.

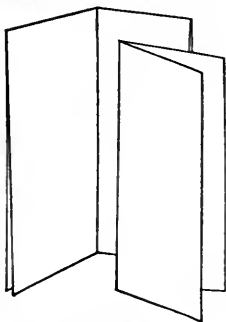


Fig. 9b.

An eight-page book may be imposed in one section of this form, and four pages of other matter in the

inset (or cut-off) section, if desired. Note the signatures* in the illustration.

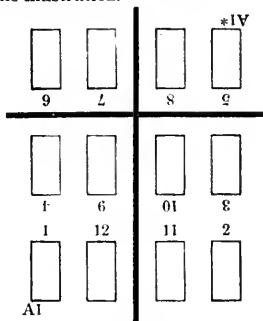


Fig. 9c.

"Other matter in a book form" is a term somewhat synonymous with "two on." The term implies that sections of different books are imposed in the same form and printed on the same paper.

The second edition of a book is usually printed from electrotyped plates, the printer commencing at the first page in the book and printing in consecutive forms until the work is completed. When the first edition of a book is to be printed from type forms, the Title page, Preface, etc., are often set aside until after the last full form of the text is printed, when these pages and any pages which may remain at the end, are printed together in one form, the sections thus printed bearing the relation to each other of "other matter" in the form.

* A letter or figure (or both) placed at the foot of the first page of each sheet of a book as a direction to the binder in folding and placing the sheet. (A1) - A = title of book ; 1 = first page of form ; A2 = first page of second form. The asterisk is used with the signature at the bottom of the first page of an inset (when inset is to be cut off) thus : A1' = inset for first form ; A2' = inset for second form.

SEXTO — DEEP WAY.

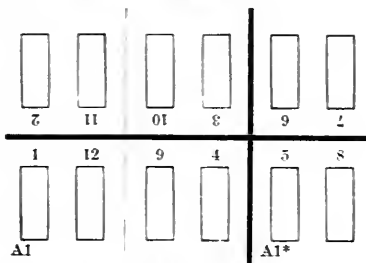


Fig. 9a.

The advantage of imposing a form of Deep Twelves in this manner is at once apparent. The utility of the solid back cannot be overestimated. The method of imposing it so that pages 9, 10, 11, 12, are required to be cut off and fastened to the end of the book is ill-advised. If possible the practice should be avoided in all forms, whether for a book containing a small or great number of pages. This form worked on a sheet of the same dimensions as that for Figs. 9a and 9b will produce a book somewhat narrower and deeper. The latter forms are preferable, however, as the register is better, and the inset is not so easily misplaced in the binding. The above form is convenient only for deep pages.

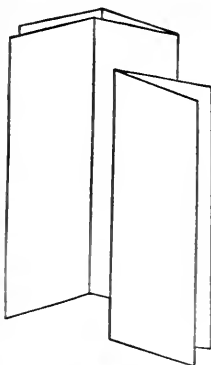


Fig. 9e.

The equal division for the trimming of the edges of the folded sheet should not be overlooked in placing the margins between the inset and the main section of the form. Sufficient space should be allowed to insure complement in the margins.

SEXTO — BROAD WAY.

In this form pages 3, 4, 9, 10, are folded in. The adjustment of the margins needs careful attention. The remarks on folding the sheet, cutting, etc., for Fig 9a, are applicable to this form. It is evident that

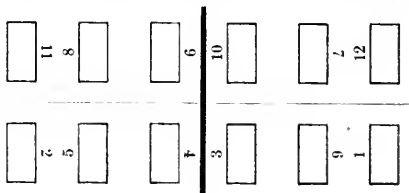


Fig. 9f.

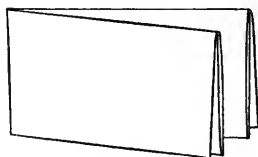


Fig. 9g.

there should be somewhat less margin at the heads of the pages in the inset than in the outer sections, that it may be more easily folded in ; the margins between the heads and feet of the other pages being equal.

Catalogues of various kinds, copy-books, etc., are occasionally made up in this shape.

EIGHTEEN-PAGE FORM.

3	16	9	10	15	4
9	11	12	11	11	9
1	18	7	8	17	2

Fig. 10.

This form will not overcome in every respect the inefficiency of the usual eighteen-page form, although it is printed and backed without transposition of pages. It is designed to facilitate the presswork and binding; hence the other forms are omitted. Careful attention to the margins will result in a printed sheet which may be folded with as much ease as a sheet containing twelve pages. The attention of the pressman should be directed to the necessity of having a little less margin at the edges of the sheet which are to be folded towards the centre in the first and third folds.

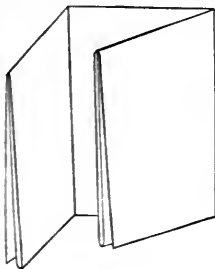


Fig. 10a.

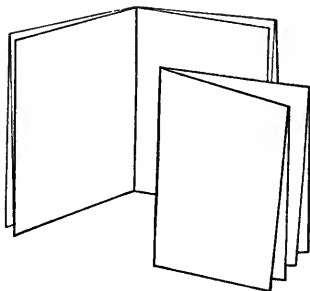
TWENTY-PAGE FORM.

Fig. 11.

The squareness of a book of twenty pages made from any ordinary size of paper, such as D. Demy or D. Royal, presents an uncomely shape. These papers are more suitable for books of oblong (16mo) shape, and as the additional four pages to the sheet demand their proportionate area of the paper surface the depths of the other pages are lessened. Like other folded sheets these are "jogged at the tops" in the binding, and the equal adjustment of the head and foot margins in the form requires special attention, the necessity of carefully dividing the sheet between the body of the form and the inset being pointed out to the binder. Or, if but a small number of pamphlets are to be printed, it would be more advisable to have the sheets cut before their delivery to the bindery.

A book of extraordinary shape such as Fig. 11 is seldom printed in large editions. A twenty-page or a forty-page book if printed in one sheet, usually necessitates an order for a special size of paper. The most

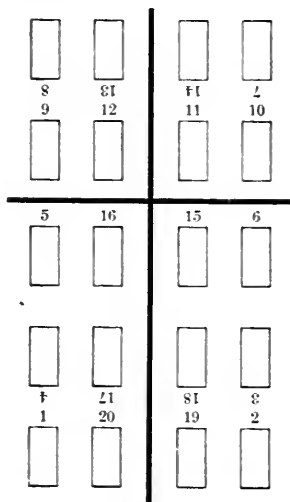


Fig. 11a.

complete facilities for paper-making which obtain in these times of unprecedented skill in this industry being ever at hand to respond quickly to the demands of the printer, books of any requisite shape may be printed without loss or delay to the printer or publisher.

TWENTY-FOUR PAGE FORMS.

INSET TO FOLD IN.

The printing of books from this form is popular. The sheet may be folded up without cutting. An equal division of the head and foot margins is necessary to secure a well-made book.

The first fold of the sheet renders the register decidedly uncertain, and for this reason the cutting off of the inset is recommended. The head and foot margins in all twelve-page and twenty-four page forms should be as evenly divided as possible. Owing to the fact that there is a difference of greater or less proportions in all book papers, however, it is

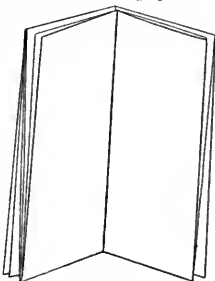


Fig. 12.

9	16	13	12	11	14	15	10
8	21	07	6	9	61	81	7
1	24	21	4	3	22	23	2

Fig. 12a.

expedient for the make-up to allow an eighth of an inch for the variability of the paper; or, in other words, that much of the paper may be trimmed off each way before imposing the form, after which the precision in the equalization of the margins must be left to the care of the pressman.

TWENTY-FOUR PAGE FORM.

(INSET TO FOLD IN.)

It cannot be doubted that the form here shown is in some respects superior to that previously presented, although it has not obtained such general approval. This may be because the plan of folding up the sheet shown in Fig. 12 in its entirety is seldom adopted. If the insets were cut away from both sheets and folded

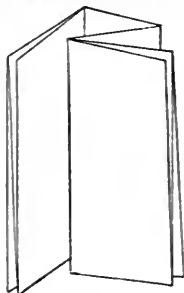


Fig. 13.

5	20	17	8	7	18	19	6
f	16	91	6	01	91	76	8
1	24	13	12	11	14	23	2

Fig. 13a.

separately, Fig. 12 would be preferable, as the long fold through the heads in Fig. 13 would thus be averted.

For work which is to be printed on the finer grades of paper, of especially good quality, Fig. 12 would be chosen; but for a cheaper class of work Fig. 13 is the more convenient, a point being placed in the form where shown in illustration.

TWENTY-FOUR PAGE FORM—DEEP WAY.

A half-sheet of twenty-four deep pages printed from this form is easily folded and makes a book of

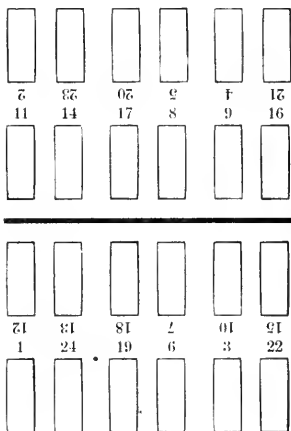


Fig. 14.

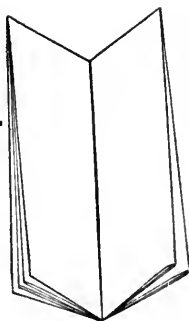


Fig. 14a.

neat proportions. Everything is favorable for a well bound book, the sheet turning lengthwise for backing

and the folded sheet having a solid back. The form is in common use for pamphlet printing.

Careful division of the margins is necessary, the pressman allotting the exact margin to the edge of the sheet to be folded in. Points placed as shown will assist the binder, and should be removed before the paper is "backed."

If imposition from the centre is desired the position of the pages in the form may be readily ascertained by reversing the last fold of the sheet.

TWENTY-FOUR PAGE FORM.

FOR MACHINE OR HAND FOLDING.

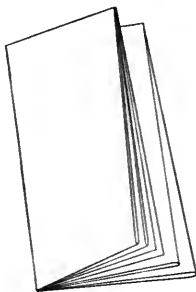


Fig. 15.

Since the excellent results in speed, cleanliness and accuracy of register have been attained by the general introduction of folding machinery into the binderies in large business centres where extensive editions of books of various kinds are in constant and immediate

TWENTY-FOUR PAGE FORM—BROAD WAY.

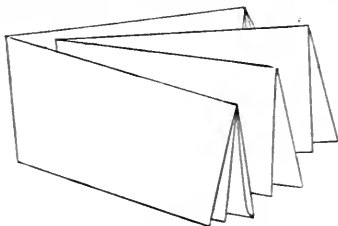


Fig. 16.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
01	21	91	6
11	14	13	12
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
F	17	77	8
5	20	19	6
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8	21	81	1
1	24	23	2
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Fig. 16a.

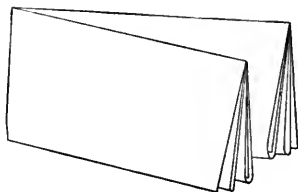


Fig. 17.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
01	91	91	6
3	22	21	4
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9	61	02	9
7	18	17	8
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
21	81	11	11
1	24	23	2
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Fig. 17a.

Twenty-four broad pages may be imposed so that the inset will fold in, but the wisdom of so folding the sheet is questionable, owing to its width, the thickness of the last fold, and the crowding at the heads. The sheet, as shewn in Fig. 16. is easily folded and of good register. As the broad book is, as other books, often made of paper of inferior kind, a form for a sheet in which the inset is folded in is appended. In dividing the margins for Fig. 16 it will be noted that sufficient extra margin is allowed between the inset and main body of the form to admit of ample trimming. The head and foot margins in Fig. 17 are divided equally throughout.

THIRTY-TWO PAGE FORMS.

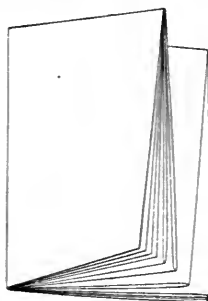


Fig. 18.

The thirty-two page form is the Alpha and Omega of imposition to the average pressman, because of the position it occupies in the printing of books of fiction, school books, etc., etc., but in practice is a tuition which gives him a knowledge of the relative positions of type pages and the making of margins

in book forms which causes him to be envied his attainment by many skilled printers.

When the pages have been placed in position and the margins for the backs of the pages allotted, the head, foot, and outside (or trimming) margins are to be determined. The equal division of these margins cannot but give satisfaction to the binder. The

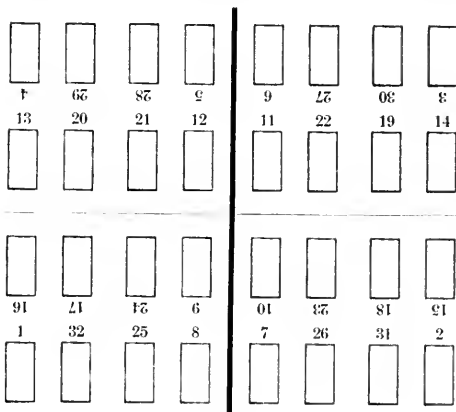


Fig. 18.

covers for books are usually made before the printing of the inside is completed, the binder calculating to receive printed sheets which, when folded, will admit of ample trimming. The ungainly appearance of the edges of a *well bound* book too often tells a tale of negligence in respect of margins.

The above figure represents the ordinary imposition of a thirty-two page form. For convenience it was imposed from type, in two sections, after the

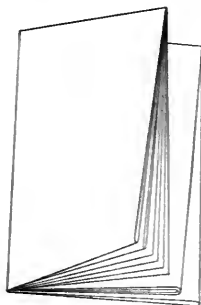


Fig. 19.

































							
21	17	07	31	11	61	22	11
5	28	29	4	3	30	27	6
							
							
8	27	28	1	7	13	97	2
9	24	17	16	15	18	23	10
							

Fig. 19a.

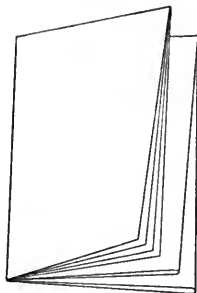


Fig. 20.

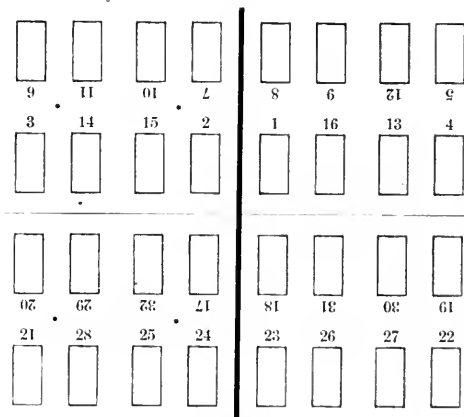


Fig. 20a.

manner of a sixteen-page form. It is considered by some to be the easiest method, because the pages follow each other in the sixteen-page rotation, one section being the reverse of the other.

The same may be said of Fig. 19a, which is imposed from the centre in the usual manner. The positions of the points in this form are $7\frac{1}{2}$ inches from the centre of the first fold—15 inches apart. Other reasons for imposing a form from the centre have already been cited.

As a rule, books made from extra heavy paper are printed as shewn in Fig. 20a, the points being placed as shewn in the illustration.

THIRTY-TWO PAGE FORM—BROAD WAY.

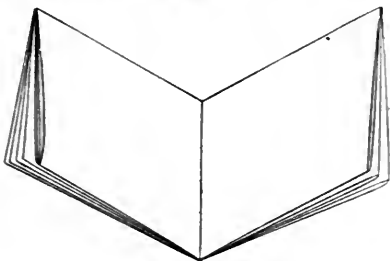


Fig. 21.

The head and foot margins of this form are equally divided throughout, and after the back margins are determined the make-up proceeds as in other forms. The successive folding through the head margins is evidence of need of good register *in the form*, and this should not be slighted if good work is expected of the binder.

Although the broad book occupies a prominent place in the printing of descriptive catalogues, etc.,

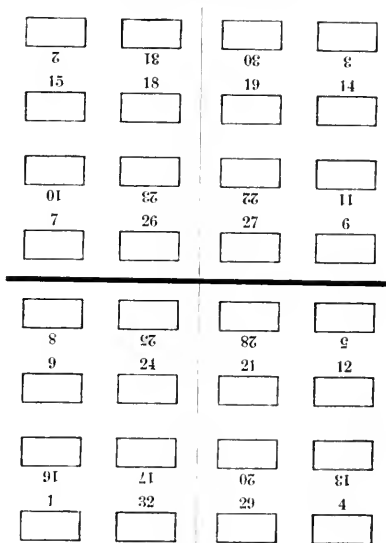


Fig. 21a.

as the shape is well adapted to illustrations, the folding machine for the "broad thirty-two" remains in the manufacturer's catalogue under the caption of "special make." The manufacture of machinery which will meet the requirements of the binder in this respect has not been developed to the extent that the output of books of broad shape seems to warrant. The vignetting of half-tone engravings has of itself created a demand for the clean white margin in the small book which the broad page only can give.

THIRTY-TWO PAGE FORM — DEEP WAY.

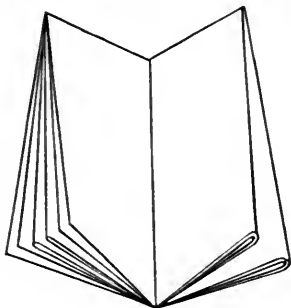


Fig. 32.

The crossbars, or bars running at right angles through the centre of the form, are indispensable if the form consists of large pages. The larger the pages, the greater the importance of having good register in the form. If the pages are carefully made up and uniform before being placed in the chase, the crossbars will, if the usual care be exercised in locking up, make easy the work of registering the pages one with another. If it should be found necessary to dispense with the crossbar running parallel with the sides of the pages, the make-up should, before laying down the pages, make square with the crossbar remaining the side of the chase against which the pages are to rest.

If it is found that the crossbar is bent when the form is tightened, it is an evidence of neglect in locking up which strips of paper or cardboard will not remedy. The loosening of a quoin or two and the tightening of those opposite will often avert the trouble.

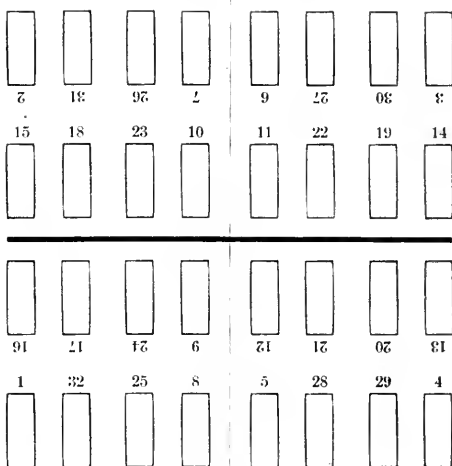


Fig. 22a.

The dimensions of a book of thirty-two deep pages, requiring a half-sheet of Quad. Crown (30 x 40) paper would be about $3\frac{1}{2} \times 9\frac{1}{2}$, and not very symmetrical in appearance. The paper for a book of more useful shape (say $3\frac{1}{2} \times 7$) would therefore require to be about square (30 x 30) to save waste in trimming. Thirty-two page books of small size made up in this shape are satisfactory to a degree which in books of greater dimensions it is difficult to attain. In the latter case the quality of the paper is the gross factor—the better and stiffer the book paper, the more difficult is it to overcome the tendency of a small book with thin coverings to spring open, whilst in thin papers this tendency is easily overcome.

PART II.

In the following pages, which consist of forms chiefly adapted to that class of book and pamphlet printing which is confined to the lower grades of paper, but some of which have their place in the printing of a better class of work, the design is to present such forms as are best suited to the work in hand. Reduction of presswork, and avoidance of complexity in folding and binding the sheet, are therefore points in the construction of these books which need the careful consideration of the printer.

On the other hand, books which are complete in one sheet, or half-sheet, and printed on heavier paper, should be imposed so that the sheet will be cut when printed, and be folded in two or more parts. [See Fig. 20a.]

The former class of work, the output of which is very great, and which is always placed in close competition, usually demands that the paper upon which the work is printed be large enough to admit of an entire book (often two or more books) being printed at one impression.

The most practicable methods of imposition for hand folding have, therefore, been adopted, and diagrams of imposition are also given which will admit of books being printed and bound two in one sheet. The impositions of some of the latter will allow of folding either by hand or machinery: but the diversity in the construction of folding machinery will not permit of more extensive directions for the imposition of these forms.

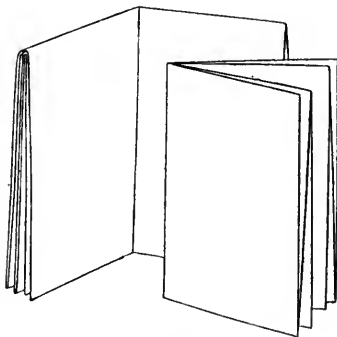
THIRTY-SIX PAGE FORM.**WITH TWO SIGNATURES.**

Fig. 23.

This form is well adapted for work which requires to be printed on the finer and heavier grades of paper. The inset is imposed at the left of the form because it is composed of full pages of typework which bear off the unevenness in the form occasioned by "light" and blank pages at the beginning of the book. The form gives a solid back for binding, and the sheet is easily folded in two parts.

As the strongest chase will spring when the quoins are tightened, whether the form be composed of large or small pages, the register depends largely upon the

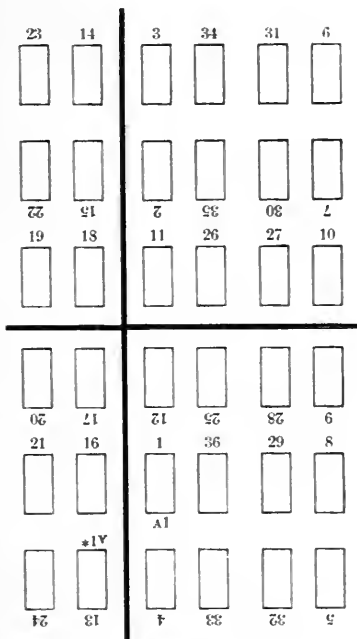


Fig. 23a.

crossbars, which should always, if possible, be used. In this form one bar should run through the centre, and the other between the inset and main section of the form.

THIRTY-SIX PAGE FORM.

WITH ONE SIGNATURE.

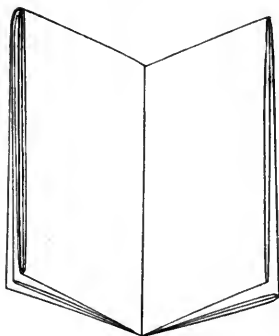


Fig. 24.

A half-sheet of thirty-six pages printed from the form shewn in the following illustration may be folded up in its entirety. It is suitable for paper of minor quality, and is of good register and easily folded. As for other forms in which the first fold is toward the centre, the margins at the edge of the sheet which is to be folded in should be carefully adjusted by the pressman.

A principle which applies to this as to other large forms is that all margin possible should be given to the outside (trimming) edges of the sheet. After the back margins have been determined, the other

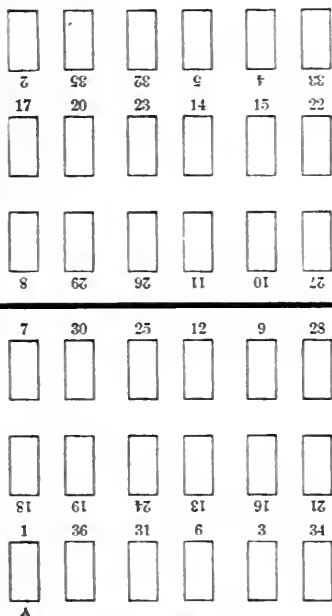


Fig. 24a.

margins should be equally and fully divided. This applies not only to those edges of the sheet which project over the form at its outer edges, but to all outside margins in the form. The head and foot margins should receive their relative proportion.

DEEP THIRTY-SIX PAGE FORM.

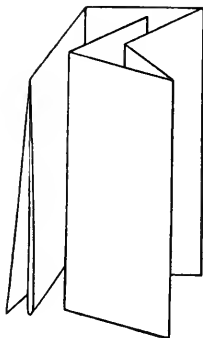


Fig. 25.

Books in which the breadth of the pages is about one-half that of their length are made of paper of special size—a small book 3 x 6 in. being printed on $18\frac{1}{2} \times 36\frac{1}{2}$ paper.

The folds of this sheet demand that the adjustment of the margins should receive the most careful attention. The outside margins of pages 25, 26, 27, 28, 29 and 30 fold into the sheet in the *fourth* fold, and should not pass beyond the centre of the margins between pages 24 and 31, where a point is placed which will be of service to the binder. One-sixteenth of an inch less margin between the six pages at the centre

4			5	2	
33			28	35	
22			17	20	
15			14	17	
10			11	8	
27			26	29	
<hr/>					
28			57	30	
9			21	7	
16			18	81	
21			12	19	
34			13	36	
3			6	1	

Fig. 25a.

of the form is absolutely necessary, and only after the form is regularly imposed and ready for final locking up should this space be withdrawn. The head and foot margins should be treated as in other forms — that is, equally divided.

FORTY-PAGE FORM.

WITH TWO SIGNATURES.

The larger section of the forty-page form is imposed so that the printed sheet may be folded in the same manner as that of the thirty-two page form (Fig. 19*a*). The small section is folded to inset as shown in illustration.

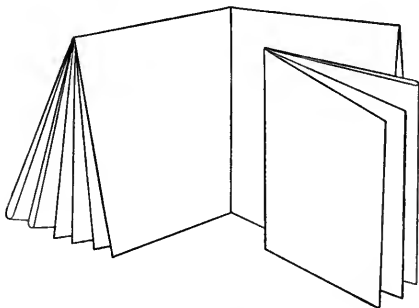


Fig. 26.

When the pages are made to suit any standard size of paper, such as D. Demy or D. Royal, the dimensions of the book will be almost square. [See remarks on twenty-page form.]

19	22	23	18	17	24	21	20
				AI*			
21	62	82	81	11	27	08	14
5	36	37	4	3	38	35	6
			IV				
8	33	07	1	7	68	18	2
9	32	25	16	15	26	31	10

Fig. 36a.

It will be found expedient in the imposition of large forms with an inset to write down in numerical order the folios of all the pages in the form, crossing the pages contained in the inset, thus :

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,
 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28,
 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40.

The make-up will first impose the pages of the main sections of the form, and then those of the inset.

When possible, it is judicious to use two crossbars, at right angles to each other, in all book forms. In large forms they are especially needful. If the chase will admit of the short bar being moved, the pages of this forty-page form will be more readily adjusted to register by placing the crossbar between the heads of the pages.

FORTY-PAGE FORM.

WITH ONE SIGNATURE.

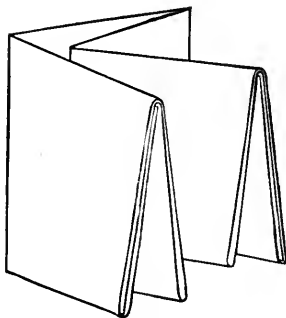


Fig. 27.

The form here presented is purposed to supply a book which is folded in one sheet.

The trimming of the paper at the ends before printing is imperative. For the convenience of the binder a point should be placed where shown — about $\frac{1}{4}$ in. from the fold, encroaching upon the main section

of the form, the pressman to deduct this space from the edge of the sheet which is folded toward the point. The division of the margins must be accurately made by the printer, especially those at the heads and feet of the pages.

The preceding form is more adaptive for the finer grades of bookwork.

81	82	83	8	4	28	42	21
13	28	33	8	7	34	27	14
71	62	73	6	10	18	08	11
19	22	39	2	1	40	21	20
91	52	96	5	9	53	95	91

Fig. 27a.

FORTY-PAGE FORM—BROAD WAY.

WITH INSET.

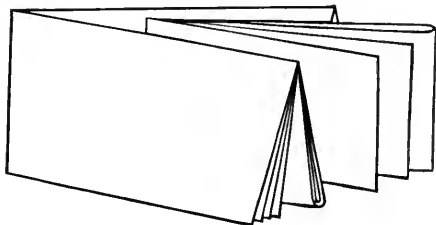


Fig. 28.

Reference to the illustration will shew that the main sections of the type form are constructed on the same principle as Fig. 21, an additional eight pages being imposed in the centre of the form, the margins to remain the same as those allotted to the other sections.

After the form, containing as it does such a large number of broad pages, has been imposed to fit the paper closely, one lead (two points), should be withdrawn from the head margins. This will provide for variability in the length of the sheets. An additional lead should be placed in the head margins of the last fold (*), which will, unless the paper be of extra heavy quality, suffice to place the pages in a position of register.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	68	88	8 *
15	26	27	14
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
01	18	08	11
7	34	35	6
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<hr/>			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
81	82	22	61
17	24	21	20
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
A1*			
<hr/>			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8	88	98	9
9	32	29	12
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
91	82	82	81 *
1	40	37	4
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
A1			

Fig. 28a.

FORTY-EIGHT PAGE FORM.

WITH ONE SIGNATURE.

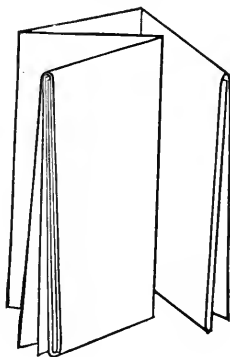


Fig. 29.

The seeming intricacies in the imposition of this form are easily dissipated if the make-up proceed by imposing the form in two parts, beginning with the cancelled figures :

1, 2, 3, 4, ~~5~~, ~~6~~, ~~7~~, 8, 9, 10, 11, 12, 13, 14, 15, 16,
 17, 18, 19, ~~20~~, 21, 22, 23, 24, 25, 26, 27, 28,
 29, 30, 31, ~~32~~, 33, 34, 35, 36, 37, 38, 39, 40,
 41, ~~42~~, ~~43~~, ~~44~~, 45, 46, 47, 48.

When the margins of the form have been allotted in the usual manner, there should be drawn from the head margin at the centre of form twelve points of space, which will avert the difficulty which would otherwise occur in the folding at the head margins.

The head and foot margins of a trimmed book are usually of equal proportions. When it is desirable to have a larger bottom than top margin, the make-up will proceed as though the margins were to be equally divided, and then deduct from the head margins the space which may be needed at the feet.

















































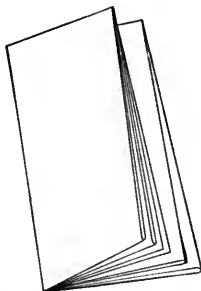
							
97	32	7	24	94	8	22	27
35	14	11	38	39	10	15	34
							
							
06	61	9	37	27	2	81	13
29	20	5	44	41	8	17	32
							
							
98	31	21	23	04	6	91	33
25	24	1	48	45	4	21	28
							

Fig. 29a.

FORTY-EIGHT PAGE FORM.

WITH TWO SIGNATURES.



(One Signature of Forty-eight Page Form.)

Fig. 30.

This form is imposed "the twenty-four way," in two distinct sections, and, as shewn by the signatures, the paper when printed is to be folded in quarter-sheets. It is adapted to heavier and finer grades of paper than the forty-eight page form preceding.

By reference to Fig. 15a it will be seen that points may be used in this form if the dimensions of the sheet will permit. The minimum size of the quarter-sheet, to be folded on a "point" machine, is 16 in. x 18 in. Thus the size of the whole sheet upon which the work is to be printed would require to be at least 32 in. x 36 in.

The imposition of all book forms admits of their being divided and printed in two sections. This form, however, if so divided, would give two distinct forms of twenty-four pages each, and to avoid printing a long and narrow sheet would be imposed as Fig. 15a.

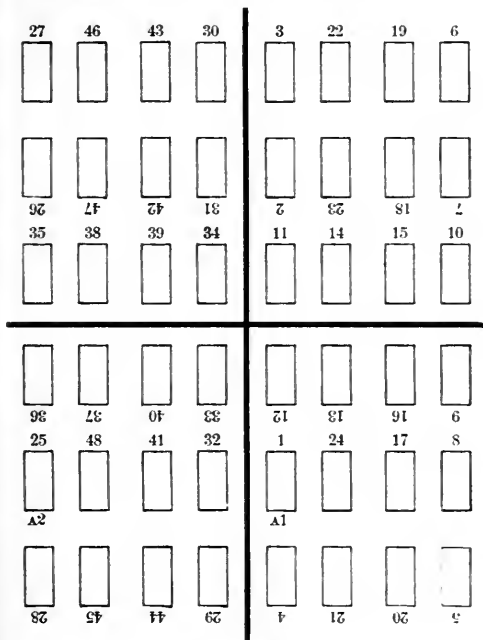


Fig. 30a.

FORTY-EIGHT PAGE FORM.

BROAD WAY—WITH INSET.

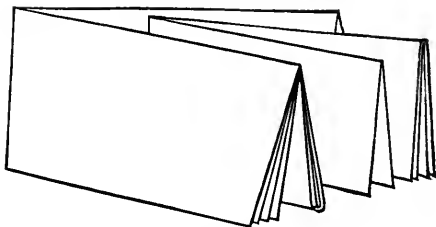


Fig. 31.

This form of forty-eight pages is suitable for paper of any quality or of medium weight. It is imposed the "broad thirty-two" way, with an inset of sixteen pages. The sections of the inset may be imposed at the ends of the form if desired. The form may readily be imposed in three signatures of ordinary "sixteens." It is not difficult, however, to fold a sheet of thirty-two broad pages, though the pages be small, and the method of imposition here shown facilitates the binding. The printer is reminded that these large forms are presented as imposed for the half-sheet — *i. e.*, the sheet when printed on both sides is to be cut into two parts, each half-sheet to contain as many pages as covered one side of the whole sheet. It is obvious, therefore, that this, as any other form, may be divided and sent to the press in sections (inside and outside). The imposition of any book form, will therefore, admit of this division. This has been stated with reference to the thirty-two page form and others. Every form having a number of pages in consecutive order contains an inside and an outside section, and may be sent to the press in one or two parts, the size of the paper upon which the work is to be printed, and the capacity of the press, indicating which shall be adopted.

2	14	94	8
15	34	35	14
01	68	88	11
7	42	43	6
<hr/>			
81	18	08	61
23	26	27	22
<hr/>			
42	92	82	12
17	32	29	20
<hr/>			
8	14	44	9
9	40	37	12
91	88	98	81
1	48	45	4
<hr/>			

Al

Fig. 31a.

SIXTY-FOUR PAGE FORM, AND SECTIONS.

Fig. 32 represents a form as imposed for a half-sheet of sixty-four. It is not the custom to print a sixty-four page book at one impression, for a half-sheet containing such a large number of pages cannot conveniently be folded. It is not so difficult to fold a larger sheet, provided the paper upon which the work is printed is not heavy. If the whole sheet were to contain but sixty-four pages, the form would be divided at the centre and sent to press in sections—inside and outside.

Other methods of imposition are appended which admit of the book being printed and bound in sections. The make-up will note, however, that if the sixty-four page book be made as shewn by Figs. 33 and 34, it will be necessary, after the folded sheets have been placed together for binding, to fasten them by stitching through the sides. This method of binding makes a strong book, and is the ordinary way of making a book of good quality, the covers of which are to be pasted on.

Another method of imposition for a sixty-four page book—that of “insetting” the centre thirty-two pages—is in many cases more satisfactory, the order of imposition being similar to that of Fig. 33, the second and third sixteen pages of the book being imposed together in one form, and the first and last sixteens being likewise imposed together.

When the sixty-four page book is imposed in sections of sixteen or thirty-two pages (Figs. 33 and 34), points may be used for the book-folding machine, the position of the points being $7\frac{1}{2}$ inches each way from the centre of the first fold.

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
11	12	29	3	2	39	09	91
19	46	35	30	31	34	47	18
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

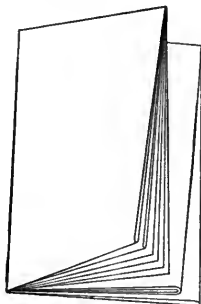
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
22	33	38	27	96	68	23	32
11	54	59	6	7	58	55	10
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
21	32	09	5	8	27	99	6
21	44	37	28	25	40	41	24
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
20	33	96	29	23	33	38	21
13	52	19	4	1	64	49	16
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

QUARTER-SHEET OF SIXTY-FOUR.

WITH ONE SIGNATURE.



21	12	02	31	41	61	22	11
5	28	29	4	3	30	27	6
			IV				
8	25	23	1	2	13	22	7
9	24	17	16	15	18	23	10

Fig. 33.

QUARTER-SHEET OF SIXTY-FOUR.

WITH TWO SIGNATURES.



66	27	96	56	17	57	87	16
19	30	31	18	17	32	29	20
				A2			
IV							
f	31	91	1	7	31	11	3
5	12	9	8	7	10	11	6

Fig. 34.

COVER FORMS.

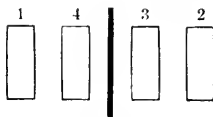


Fig. 35.

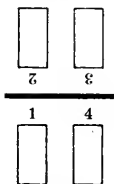


Fig. 36.

The forms shewn above are for books with paper covers. The margins are the same in every respect as those of the inside sheets. Additional space is given to the back margin in accordance with the requirements of the number of sections in the book — a book of sixty-four pages in signatures of sixteens requiring an addition of about twelve points of space.

The head margins should correspond exactly with those of the inside, as the book throughout, together with the covers, is registered in the bindery by jogging to the top and back.

The type pages of the cover, before being placed upon the stone, are made to correspond in size with the inside pages of the book. Should it be necessary to have them of unequal size, they may be registered to a four-page section of the book. [See remarks on pages of unequal size in one form.]

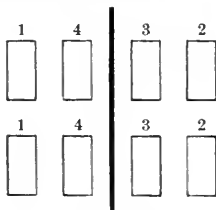
DOUBLE FOUR PAGE FORM.

Fig. 37.

The above is the ordinary imposition of a double cover form.

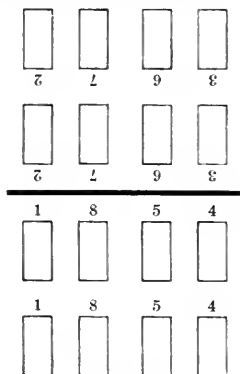
DOUBLE EIGHT PAGE FORM.

Fig. 38.

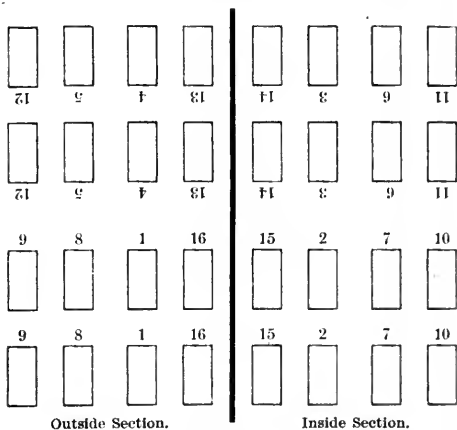
DOUBLE SIXTEEN PAGE FORM.

Fig. 39.

When books are printed "two on," or double, the form is usually imposed so that the books may be folded together in one sheet, end to end, to be afterwards cut apart.

Before imposing a double book form, the exact size the publisher requires the book to be should be known. In binding, no trimming should be necessary save at the top, bottom and front edges of the double book. At the dividing point the cutting apart of the books should suffice without further trimming.

DOUBLE TWENTY-FOUR PAGE FORM.

	91		91	14		14	
--	----	--	----	----	--	----	--

	01		01	11		11	
--	----	--	----	----	--	----	--

	2		2	2		2	
--	---	--	---	---	--	---	--

	81		81	23		23	
--	----	--	----	----	--	----	--

	61		61	22		22	
--	----	--	----	----	--	----	--

	9		9	3		3	
--	---	--	---	---	--	---	--

	5		5	4		4	
--	---	--	---	---	--	---	--

	20		20	21		21	
--	----	--	----	----	--	----	--

	17		17	24		24	
--	----	--	----	----	--	----	--

	8		8	1		1	
--	---	--	---	---	--	---	--

	6		6	12		12	
--	---	--	---	----	--	----	--

	91		91	13		13	
--	----	--	----	----	--	----	--

Inside Section.

Fig. 40.

Outside Section.

DOUBLE THIRTY-SIX PAGE FORM.

10		10			11		11	8		8	
27		27			26		26	29		29	
22		22			23		23	20		20	
15		15			14		14	17		17	
4		4			5		5	2		2	
33		33			32		32	35		35	
34		34			31		31	36		36	
3		3			6		6	1		1	
16		16			13		13	18		18	
21		21			24		24	19		19	
28		28			25		25	30		30	
9		9			12		12	7		7	

Inside Section.

Outside Section.

Fig. 42.

DOUBLE FORTY-PAGE FORM.[illegible]

DOUBLE FORTY-EIGHT PAGE FORM.

7	47	97	37	01	68	88	11	77	27	94	8				
7	47	97	37	01	68	88	11	77	27	94	8				
7	42	31	18	15	34	35	14	19	30	43	6				
7	42	31	18	15	34	35	14	19	30	43	6				
7	42	31	18	15	34	35	14	19	30	43	6				
8	41	32	17	16	33	96	13	20	29	44	5				
8	41	32	17	16	33	96	13	20	29	44	5				
1	48	25	24	9	40	37	12	21	28	45	4				
1	48	25	24	9	40	37	12	21	28	45	4				
1	48	25	24	9	40	37	12	21	28	45	4				

Inside Section.

Outside Section.

Fig. 44.

DOUBLE SIXTY-FOUR PAGE FORM.

[Fig. 45.]

48	17	16	49	56	9	24	41
48	17	16	49	56	9	24	41
33	32	1	49	57	8	25	40
33	32	1	49	57	8	25	40
36	29	4	61	60	5	28	37
36	29	4	61	60	5	28	37
45	20	13	52	53	12	21	44
45	20	13	52	53	12	21	44

Outside Section.

42	23	10	55	50	15	18	47
42	23	10	55	50	15	18	47
63	26	7	58	63	2	31	34
39	26	7	58	63	2	31	34
38	27	6	59	62	3	30	35
38	27	6	59	62	3	30	35
43	22	11	54	51	14	19	46
43	22	11	54	51	14	19	46

Inside Section.

ENVELOPE FORMS.

The die with which the envelopes are cut out of the flat paper is used by the manufacturer in making the diagram (Fig. 46).

With the aid of a small drawing square a line is drawn at the top of each envelope, by the printer, from A to B; lines are then drawn at right angles from A to C, and B to D, then parallel from C to D.

The position of the printing may now be roughly marked out on each envelope.

The oiling of the sheet on the back is the next step—thin machine oil and a small piece of batting being used for this purpose—that the pencil lines may be distinctly seen through the paper. When this has been done the sheet is fastened with drawing-pins to a mounting block made of well seasoned pine boards, firmly glued together, and battened at the ends. The electros are then placed on the paper, and after being set in the position already marked out for them on the reverse side of the sheet, are fastened to the mounting block with screws or small wire nails.

Points, the positions of which are shown by A and B in the illustration, are printed at the intersecting points at the top line of the envelopes, in the first few sheets, as a guide to the maker in setting the die. They may be made the same height as type, of $\frac{1}{2}$ in. steel wire.

Before sending the form to the pressroom the sheet should be carefully cut at the edges of the electros, and removed. It should not be destroyed, however, as it may be placed over the electros again, and will be of much service should it be found necessary to move a plate which has not been properly set.

By reference to the illustration, it will be seen that the sheet is drawn well over to the gripper edge of the mounting board. This provision is necessitated by the thickness of the grippers, which may be thicker than the electros. It also makes it possible for the form to be moved into a desirable position by the pressman.

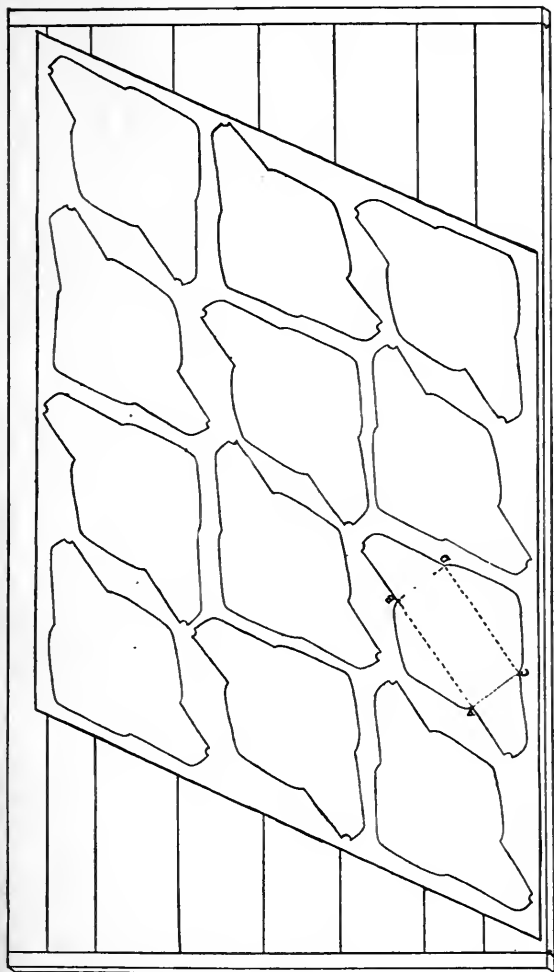


Fig. 46.

MARGINS.

The top, bottom and front edges of a book are termed "trimming margins" in the type form. The margin to be given the pages at the "back" is therefore a most important feature of the imposition of a book form, and should be first determined. If a sheet of paper upon which the work is to be printed were

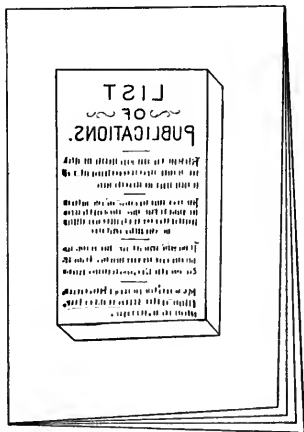
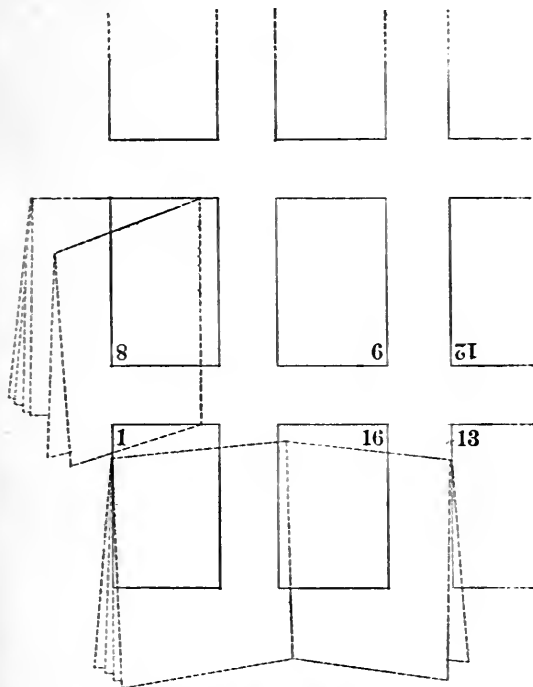


Fig. 47.

neatly folded and a page of the type placed upon it in such a manner that the front margin would admit of ample trimming and yet be broader than that between the type page and the back edge of the folded sheet, the back margin would then be determined. Were the folded sheet to have the page of type set upon it in an absolutely correct position, the



(Section of thirty-two page form.)

Fig. 48.

margins of the form throughout could be definitely ascertained by puncturing the folded sheet with a thin blade as close as possible to the edges of the type page on all its sides. [See Fig. 47.] The pages of the type form could then be adjusted to the marks on the opened sheet.

The placing in of the marginal furniture by the use of the folded sheet as a means of measurement, is an effectual method. After the marginal space has been set between the pages at the backs, the front margin is determined by opening the paper one fold and measuring from the front edge of page one [Fig. 48] to the front edge of page 13, the full space between pages 13 and 16 being the front marginal space, one-half of which belongs to each of the pages between which it lies. This measurement decides the mean marginal space for the front margins throughout.

The head and foot margins are found by measuring with the folded sheet from the headline of one page to the footline of the page above.

Should it be desired that a greater foot margin be given than that at the heads of the pages, it will often be found easier to first impose the form in the ordinary manner, and then deduct from the head margin that which is to be added to the margin at the foot.

Rule measurement is the most convenient method for allotting margins, and the sheet of paper may be entirely dispensed with when its dimensions are known. A quarter-sheet of the paper or a two-foot rule will serve to determine the margins in any book form.

PAGES OF UNEQUAL SIZE IN A FORM.

To impose four pages, all of which differ in size, the pages are first drawn into the corner of a chase, where they may be readily and accurately placed in position by taking two pieces of wooden furniture of equal length and of about the same length as the

longest page and centring them upon the pages which are against the sides of the chase. The head and foot margins are then defined by measuring with the paper from the foot end of one piece of furniture to the top end of the other. The remaining two pages may be centred beside those now in position. The front and back margins may be found by the same method.

A number of mounted electros of unequal size—for example, thirty-two pages of advertisements which have been set up for use at times to supplement various books of crown octavo shape—are to be imposed in one form. These pages differ little in length, and therefore are usually registered at the headlines, whilst they are otherwise centred one with the other. The pages are first placed in the order of imposition in a chase which contains crossbars. The sixteen pages touching the long bar are then taken singly on to a galley and made of equal length, the addition being to the foot of each page. When this work is finished, all headlines in the form will register. If it is necessary to centre the pages in their lengths, the space at the feet may now be divided equally between head and foot margins. Should the pages vary in width, one of average size may be placed on a carefully folded sheet of the paper in the position desired for the printed page. The space from the edge of the electro to the edge of the paper will (say) at the front (open) edge be $1\frac{1}{2}$ inches, and at the back edge 1 inch. The distance between the pages would, if they were of equal width throughout, be 3 inches at the front and 2 inches at the back, and the difference in the width of the other pages must be added to or deducted from these margins. To accurately obtain the positions, therefore, a reglet or long strip is taken which will fully extend across the form. Beginning at the end of the strip in the left hand the margins and page widths are marked out on the strip, after which the pages are centred by the lines representing the sides of the pages on the strip, the end of the strip being set at a line on the chase drawn at right angles to the short crossbar.

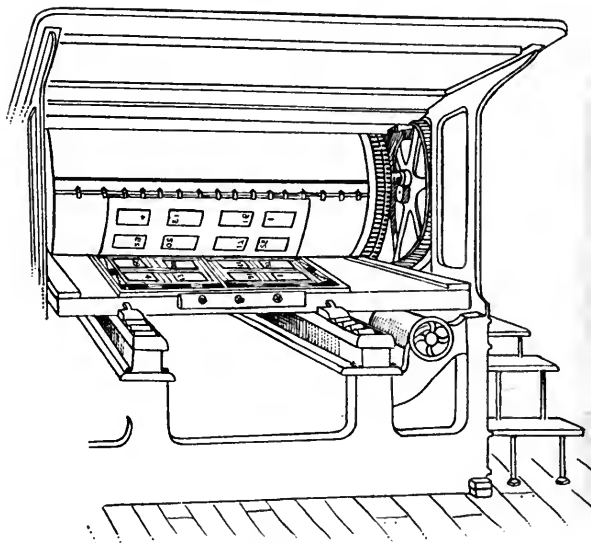


Fig. 49.

GRIPPER MARGIN.

As applied to book forms, the space between the type and the outer edge of the chase at the gripper side is the gripper margin. As no definite measurement can be given here for the width of this margin, printing presses of different size and manufacture varying in this respect, it may be said that the average gauge for large cylinder presses is three inches, and two inches for "pony" cylinder presses. The

construction of the press-bed and clamps of some cylinder presses admit of a form being moved forward a short distance to the grippers. A gauge showing the gripper margin for each press should be obtained from the pressman.

Provision should be made for gripper margin when the marginal furniture is placed beside the long cross-bar in the form. For commercial work which is to be printed on a cylinder press, the gripper margin may be defined by placing the paper on the type in its corresponding position. The paper is then brought to within $1\frac{1}{2}$ inches of the outer edge of the chase. The pressman may then easily move the form into a suitable place.

Fig. 49 shews the gripper margin of a form and the gripper edge of a sheet of thirty-two pages, the outside sixteen-page section being printed. The lowest folio of the form determines the gripper edge. The pages of the inside form will be imposed in corresponding positions in the chase, in order that the same edge of the paper may be fed to the gripper guides. The lowest folio in the form also indicates the gripper edge of a form which "backs itself."

REGISTER.

"Register" is the correspondence of pages, or lines, opposite to each other, or on the reverse side of the sheet. As it contributes to a great extent to the results of the work throughout, it should be strictly regarded from the commencement of the work. If the pages are carefully made of one size at the galley, their adjustment and register in the form is assured.

When the pages have been placed in their corresponding positions in the chase, and the marginal furniture has been allotted, the quoins should be gently tightened, and the sides of the pages examined for points or letters which may have been disturbed in removing the strings. Equal pressure is then given to the form on all its sides.

The parallel strip and square are the means of registering the pages of a book form. The strip, laid

against the headlines of the pages whose footlines touch the crossbar, will show any variation in the length of these pages, and if the marginal furniture between the tops of the pages is of equal width, the register at the headlines is obtained. The sides are registered by squaring from the headlines.

If the two outer rows of pages in the form are made to register with each other at the headlines, the amount of variation in the other pages may be discovered by drawing a thread tightly across the headlines and adjusting the intervening pages to the thread. This will be found advantageous in the imposition of large forms of electros which are sometimes imposed without having been subjected to the ordinary plan of making all the pages of equal length on the galley.

The folios are usually the guides for hand-folding and should receive liberal attention, for a book of the most ordinary quality, as well as the book of superior grade will not be registered in binding unless the folios are in a position of register, whether they be at the head or foot of the page.

A strong slug or reglet should be placed at the head and foot of a large page of type before it is tied up. Secure tying is the only safeguard for a page of type until it is locked up in the chase.

SIZES OF BOOKS.

FOLIO—A book of two leaves, or four pages ; **QUARTO**—Four leaves, or eight pages ; **SEXTO**—Six leaves, or twelve pages ; **OCTAVO**—Eight leaves, or sixteen pages ; **16-mo**—sixteen leaves ; **18-mo**—eighteen leaves ; **24-mo**—twenty-four leaves, etc.

In the making of books, such terms as **Crown**, **Demy**, **Royal**, etc., are used to designate the size of paper from which a book is made : A sheet of **Crown** measures 15 in. x 20 in. ; the Size of a **Crown octavo** (Cr. 8vo) book would, therefore, be 5 in. x 7½ in.

A FEW SUGGESTIONS.

The makeup should learn to use the measuring rule or tape measure. They are more convenient to measure with than paper, and their use is regarded as evidence of knowledge of the imposition of book forms.

Ascertain what furniture will be required for the margins of a book form before placing it upon the stone. Time will be saved, and the work will have the appearance of order and neatness.

The inner wedge of a quoin in a book form should point towards the crossbar.

Quoins lose their grip when wedged between the iron chase and wooden furniture. A thin piece of cardboard placed between the quoin and chase will overcome the difficulty. For the protection of the furniture a thin reglet of wood should be used between quoin and furniture.

To raise a form from the stone which is too heavy at the centre to be lifted with safety, a smooth board, which will extend fully across the form and chase, may be nailed securely to the furniture near the centre of the form. The space at each end between the board and chase should be tightly filled up before lifting the form. The type should be protected with soft paper.

Much time and labor will be saved in the imposition of "books of words" of sixteen or more pages, for concerts, cantatas, etc., in which the pages of words are folioed in consecutive order, and in which the pages of advertisements have no folios, if all of the pages (from 1 to 16) are labelled, according to their order, with small slips of paper, before being placed in the form.

Duplicate pages are necessary for the printing of a double book form.

A clean proof, taken on a sheet of white paper, which will give a broad white margin to the reading matter on all sides, is not only pleasing to the author, but will often influence him to overlook other things which may seem to him defective.

The type used in pages containing illustrations should be made up dry. Wet type invariably affects the bases upon which the illustrations are mounted. It will also warp the furniture in the form.

A poster form, if left standing through changeable weather, will fall to pieces.

Marginal notes and references, when placed beside the text, are on the folio side, or outside margin, of the page.

In the dissection of an intricate page for color work, time will be saved if a proof of the key form is made on a piece of thin, smooth paper. The printed sheet is then placed face down on the galley, when the type for the second color may be arranged over the printing as seen through the paper. Should the printing not be distinctly seen, place a sheet of white paper between the galley and the design.

In the setting of solid type *around* a cut which is in the centre of a page, the typework must be divided into two or more columns above and below the cut.

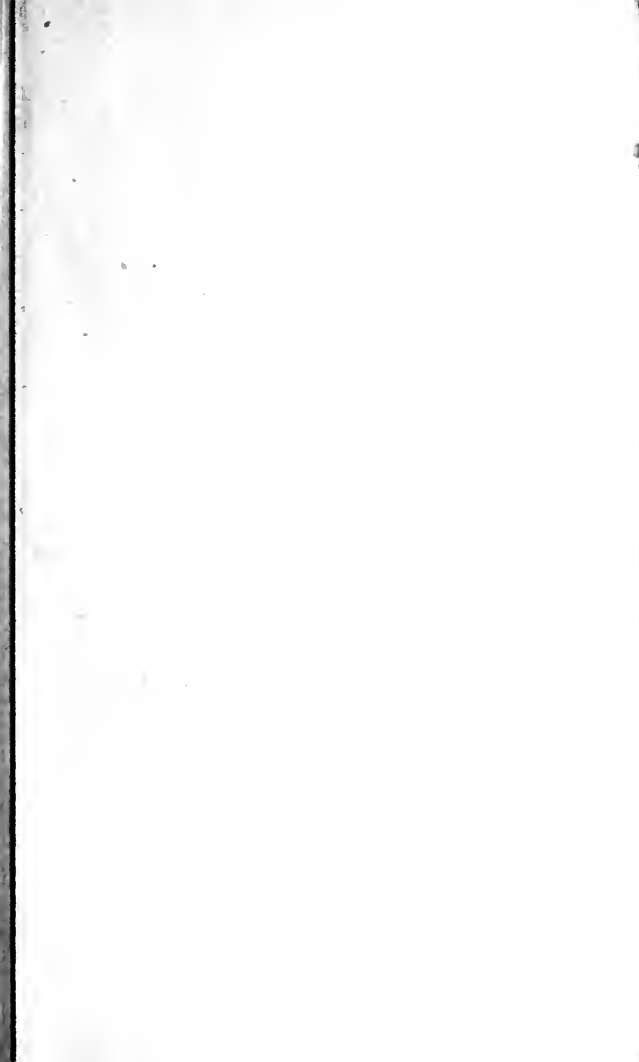
If a cut or illustration is turned sidewise in the type page, the page should be so made up and imposed that if the folio of the page is an even number the head of the illustration will be at the folio side of the page, and if the folio of the page is an odd number

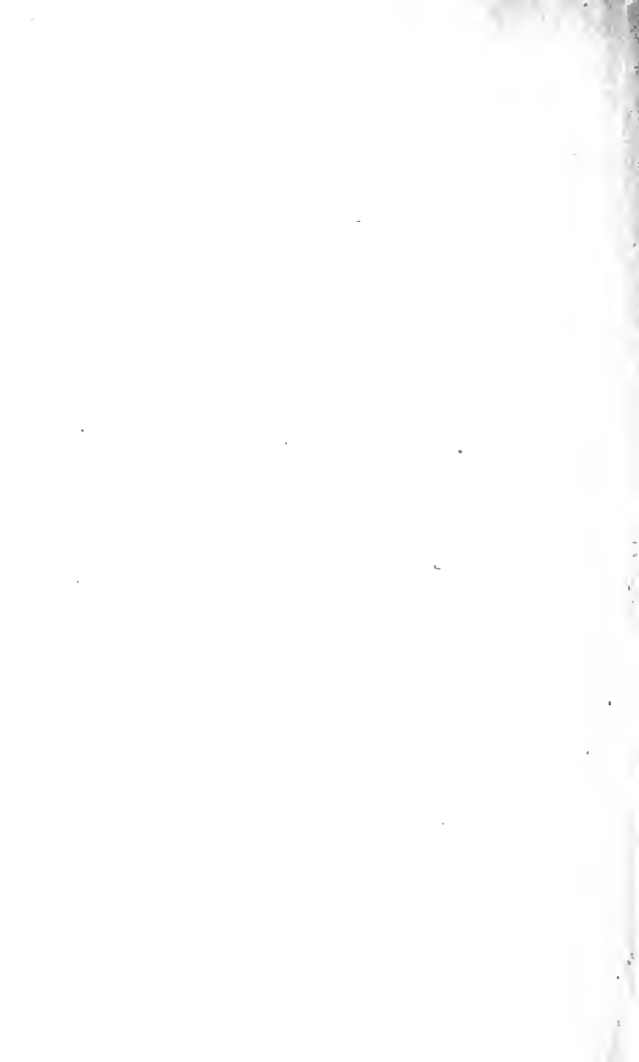
the foot of the illustration should be at the folio side. The same rule should be observed if the two illustrations are to be opposite each other in the book.

These directions are also applicable to pages of tabular work.

To measure type, multiply the number of solid ems contained in the width by the number of solid ems contained in the length.

The quantity of plain type required for a book or magazine may be ascertained by finding the number of square inches of reading matter and dividing the same by four; the quotient gives the approximate weight of the type. As it is not possible to set the cases clear, add 25 per cent. to large fonts and 33 per cent. to small fonts, which will allow for unused type remaining in the cases.





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Author Williams, T.B.

Title Hints on imposition.

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